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GLOBAL CHALLENGES

14 LIFE BELOW WATER

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Regulating Deep Sea Mining for Sustainable Development

UNIVERSITY OF BERGEN

The Sustainable Development Goal target 14.c aims to 'enhance the conservation and sustainable use of oceans and their resources by implementing international law'. In order to accomplish this, we need an internationally developed and enforced deep sea mining code.

3 Key Points

- Deep sea mining activities pose a great risk of pollution that have direct short and long-term harmful effects on ecosystems and local communities.
- Large profits in deep sea mining may lead to territorial claims over deep sea mineral extraction mines that can result in militarisation of ocean depth and conflict in the local communities.
- The lack of an international deep sea mining code leaves ecosystems vulnerable to exploitation and people at risk of displacement, conflicts, poverty and regional imbalance.

Introduction

"Blue Economy" refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs, while preserving the health of the ocean ecosystem. Blue Economy concerns established, emerging and innovative sectors and includes the practice of deep sea oil extraction, fishing, mineral and rare Earth metal mining and herb extraction (used for medicinal purposes), among other things. This Policy Brief aims to explore the inter-linkages and mutual effects on and between SDGs 13 (Climate Action), 14 (Life Below Water) and 16 (Peace, Justice and Strong Institutions). In particular, this Policy Brief looks at the harmful effects of deep sea mining and gives recommendations on how deep sea mining can be made beneficial for the development of communities, coastal resources and climate change.

The deep sea remains a largely inaccessible and understudied area, leaving much to explore about its rich biodiversity and ecosystem. Since many species are still undiscovered, it is difficult to estimate the potential harmful impact of unregulated deep sea mining. Studies carried out by the United Nations Convention on The Law of the Sea or UNCLOS (1982) as well as The International Union for Conservation of Nature (Cuyvers 2018) mention the potential environmental hazards due to unscrupulous ways of deep sea mining that leads to great imbalance of deep ocean habitats and coastal communities.

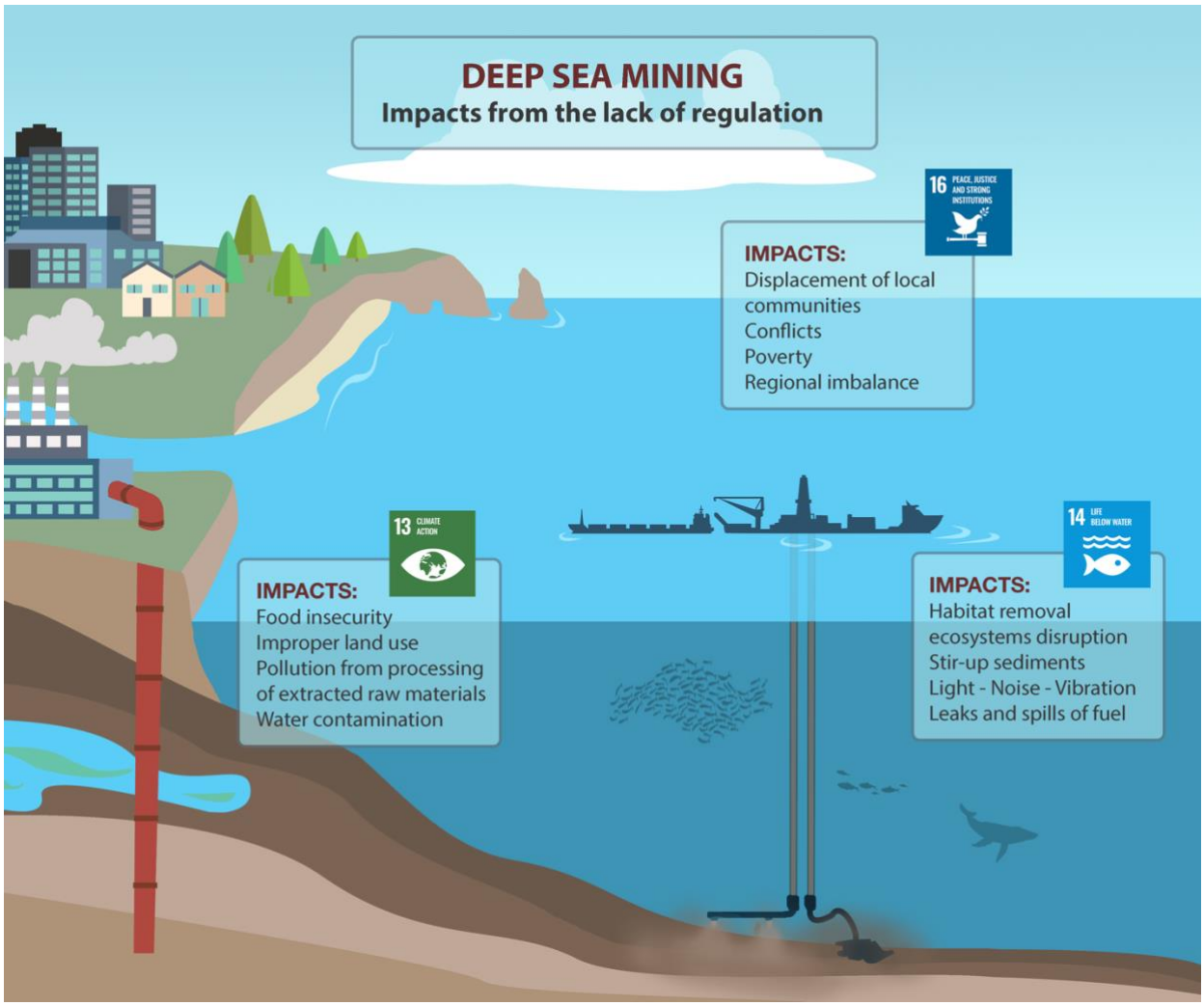
'Scraping' of the seafloor destroys habitats, leading to loss of species and functional ecosystems like planktons, algae and seaweeds which have medicinal values. Mining activities may stir up sediments and locally pollute the water, affecting feeding sites and directly harming filter-feeding species. Further, pollution from noise, vibration, and light can affect and alter the behaviour and wellbeing of several species.

Finally, leaks and spills of fuel and toxic products can have direct short and long-term harmful effects on species, ecosystems, and acidification and pollution of the ocean (Cuyvers 2018). In addition, pollution related to the use of extracted raw material in production of goods will affect climate change processes, in turn leading to associated risks of migration, conflicts, poverty and regional imbalance.

Since 1989, preliminary regulations have been formulated in the International Seabed Authority (ISA) Mining Code whereby Phase 1 was concerned with the exploration of seabed mining and is completed while Phase 2 relates to the extraction of marine minerals. Although these preventive measures are important and relevant, they do not appear sufficient to secure social, economic and ecological sustainability. Experts mainly record shortcomings of adequate ecological knowledge and the resulting inability to adequately and quantitatively define environmental impacts for purposes of risk assessments.

The projects implemented in seabed mining areas have positive and negative impacts on local communities. Everyone benefits equally when revenues from deep sea mineral extractions are spent for socio-economic development. Investments in healthcare, education and other public goods and services could be helpful in developing infrastructure, creating more employment opportunities for the local population leading to a harmonious effect on the development of the region. Meanwhile, studies claim a negative relationship between seabed mining and economic development (Miller, 2018). In countries with high corruption rates lacking just and comprehensive financial governance, mining derived benefits can be harmful for local communities as well as lead to climate change. The unequal distribution of profits from mining projects can instigate confrontation and civil unrest that might hamper the development of the region. The damaged ecological system due to deep seabed mining might cause serious problems for local coastal communities in terms of food security and result in rivalry over catchment areas resulting in human rights violations, environmental pollution, improper land use and ownership issues. Deep ocean resources are turning competitive where maritime nations begin to consider the deep sea as having strategic importance to gain political advantage in controlling international deep waters. Territorial claims over deep sea mineral extraction may result in militarisation of water bodies and may instigate a war like situation.

There is an urgent need to have stringent laws and regulations for deep sea mining in international waters so that nations, regions, communities and individuals can benefit from such legal sanctions and adherence to rules can have safe and sustainable futures for nations and communities the world over.



Picture illustrating the possible negative impacts of unregulated deep sea mining.

Analysis

"The Mining Code" refers to the set of rules and procedures issued by the International Seabed Authority (ISA) to regulate exploration and exploitation of marine minerals in the deep seabed beyond the limits of national jurisdiction. Currently, the ISA has introduced Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area (2010) and the Regulations on Prospecting and Explorations for Cobalt-Rich Crusts (2012). These include the forms necessary to apply for exploration rights as well as standard terms of exploration contracts. The complete set of the regulation will form part of the Mining Code together with recommendations by the ISA's Legal and Technical Commissions (LTC) for the guidance of contractors, including those on the assessment of the environmental impacts of exploration for polymetallic nodules (ISA, 2021). Furthermore, adequate rules for the phase relating Seabed Mining Extractions and Commercial Operations are expected to be adopted shortly following the completion of the newly draft Regulations for Extraction of minerals in the deep seabed area. In addition, the Common Heritage of Mankind Principle affirms that the natural resources of the deep seabed and of the outer space are held in common by all nations and should be distributed equitably for the benefit of all humankind (Holmila, 2005).

Conclusion

A sustainable strategy for and regulation of deep sea mining is crucial for maintaining sustainable international relationships and fostering a sustainable planet. The Mining Code should be the basis for solving the conflicts which would appear in the transnational transactions in the deep seabed mining sector. It could also act as the credible source for solutions in favour of local communities around the world affected by the extractions and the commercialisation related to marine minerals, as well as mitigating climate impacts.

Recommendations

- Introduce standardized data and metadata reporting Nations should ratify the mining code of conduct for deep sea mining.
- More research and strengthened international collaboration is necessary to ensure safe extraction of deep sea minerals and resources.
- Local communities should be empowered so as to protect their lives and livelihood.

Further relevant SDGs:

IMPRINT
Bergen Summer Research School's 2021 participants
in partnership with PhD course holders professor
Birgit Kopainsky, Dr. Hiwa Målen and Dr. Ingunn Johanne Ness.

Relevance to the 2030 Agenda

SDG 14.c is one of the ten targets under SDG 14: *Life below Water*, building towards the 2030 Agenda.

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Selected references

Couper and Gold (2007), The Marine Environment and Sustainable Development: Law, Policy and Science, Proceedings, The Law of the Sea Institute, 25th Annual Conference, August 6-9, 1993, Malmö, Sweden, University of Virginia (Digitized Edition)

Cuyvers, L. et al. (2018). Deep seabed mining: a rising environmental challenge. Gland, Switzerland: IUCN and Gallifrey Foundation.

Hance and Couper (2003), "Common heritage of Mankind", The Management of Cultural Heritage, Vol 4, pp. 25-33

Holmila (2005) "Common Heritage of Mankind in the UNCLOS", Accessed on 11.06.2021 at https://heinonline.org hol-cgi-bin get_pdf > actsoma1

International Seabed Authority (2021) "Mining Code". Accessed on 11.06. 2021 at https://isa.org.jm/mining-code

Miller, Kathryn, A. et al. (10 Jan, 2018). An Overview of Seabed Mining Including the Current State of Development, Environmental Impacts, and Knowledge Gaps. Accessed on 15.06.2021 at https://www.frontiersin.org/articles/10.3389 /fmars.2017.00418/full - B

Roche, Charles & Bice, Sara. (2013). Anticipating Social and Community Impacts of Deep Sea Mining.

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SDG Bergen Science Advice

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